USE OF (PER) FLUOROPOLYETHER DERIVATIVES IN THE TREATMENT OF SUBSTRATA HAVING A LOW SURFACE ENERGY

ABSTRACT

Use for improving the hydro- and oil-repellence properties of substrata having a low surface energy of (per)fluoropolyether mono- and bifunctional derivatives having the structures:

$$W-L-YFC-O-R_f-CFY-L-W$$
 (I)

$$R_{f}-CFY-L-W \tag{II}$$

wherein:

L is a linking organic group -CO-NR'-(CH₂)_q-, with R'=H or C_1 - C_4 alkyl; q is comprised between 1 and 8; Y=F, CF₃; W is a -Si(R₁)_{α}(OR₂)_{3- α} group with α =0,1,2, R₁ and R₂ equal to or different from each other are C_1 - C_6 alkyl groups, C_6 - C_{10} aryl groups, C_7 - C_{12} alkyl-aryls or aryl-alkyls;

 $R_{\rm f}$ has a number average molecular weight in the range 200-5,000 and comprises repeating units having at least one of the following structures:

(CFXO), (CF₂CF₂O), (CF(CF₃)CF₂O), (CF₂CF(CF₃)O), wherein X = F, CF_3 .